

CLAIMS

1. An aircraft pneumatic tire comprising:
 - bead cores provided in a left-and-right pair of beads;
 - a carcass extending from the crown of the tire through both sidewalls of the tire to both beads, wound around the bead cores, and thereby fixed to the beads;
 - a top tread disposed on the outside of the carcass in the radial direction of the tire; and
 - at least one crown protective layer disposed between the carcass and the top tread,wherein at least part of the top tread in the width direction of the tire has a two-layer structure consisting of a base tread layer and a cap tread layer stacked in the radial outward direction in this order, at least one circumferential groove is provided in the surface of the top tread, and the base tread layer and the cap tread layer satisfy the relationships expressed by the following formulas (1) and (2):

$$1.05 < M(50)_b/M(50)_c \leq 1.30 \quad (1)$$

$$1.04 < R_b/R_c \leq 1.20 \quad (2)$$

(wherein $M(50)_b$ and $M(50)_c$ denote 50% moduli of the base tread rubber and the cap tread rubber, respectively, and R_b and R_c denote the resiliences of the base tread rubber and the cap tread rubber, respectively).

2. The aircraft pneumatic tire according to Claim 1, wherein the base tread layer and the cap tread layer satisfy the relationship expressed by the following formula (3):

$$0.15 \leq G_b / (G_b + G_c) \leq 0.50 \quad (3)$$

(wherein G_b denotes the thickness of a base tread rubber and G_c denotes the thickness of a cap tread rubber) in a region occupying at least 90% of the crown protective layer width, except a portion directly under the circumferential groove and occupied by the circumferential groove width.

3. The aircraft pneumatic tire according to Claim 1, wherein the cap tread rubber has a 50% modulus $M(50)_c$ of 1.5 to 1.7 MPa, a 100% modulus $M(100)_c$ of 3.0 to 3.3 MPa, resilience R_c of 50 to 52, and a dynamic storage modulus E' of 0.9 to 1.2 MPa.

4. The aircraft pneumatic tire according to Claim 1, wherein the relationship expressed by the following formula (4) is satisfied:

$$h/H \geq 0.009 \quad (4)$$

wherein h denotes the depth of center grooves, which are the circumferential grooves nearest to the equator line of the tire, and H denotes the nominal outer diameter according to the notation by TRA.

5. The aircraft pneumatic tire according to Claim 1, wherein the depth of center grooves, which are the circumferential grooves nearest to the equator line of the tire, is at least 10.2 mm and the top tread has a two-layer structure in the vicinity of the center grooves.

6. The aircraft pneumatic tire according to Claim 1, wherein the top tread has the two-layer structure only in the vicinity of the circumferential grooves that are disposed farthest from the equatorial plane of the tire.